

Enhancing Academic Performance of Omani Students in the IELTS-Based Reading Exams: Influence of Reading Strategy Interventions

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Abstract

This study investigates how using reading strategies as an intervention effectively improves the academic performance of Omani students at level 4 in the IELTS-based reading exams. Eight research questions and corresponding null hypotheses were formulated and tested to find out the influence of reading strategy interventions on test outcomes. About 24 students studying at level 4 in the General Foundation Program of the Preparatory Studies Center, University of Technology and Applied Sciences-Ibra, participated in the study. The experiment group had 12 students, and the control group had 12 students. A pre-test was administered to both groups to assess their initial performance. Following that, targeted reading strategy interventions were given to the experiment group. The control group did not receive any such interventions. A post-test was given to both groups at the end of the intervention period. The comparison of test scores revealed that the experiment group performed better than the control group, which means that the reading strategy interventions positively affected the academic performance of the experiment group compared to the control group. Hence, it is recommended that targeted reading strategy interventions be incorporated to enhance the academic performance of level 4 Omani students in the IELTS-based reading exams.

Keywords: academic performance, intervention, IELTS, Omani students, reading strategies

1. Introduction

English has gained global prominence as an international language. As a result, many countries have introduced it as a second language or a foreign language in their educational systems. Oman is not an exception to this. In 1970, English as a second language (ELT) was introduced into Oman's educational system. Since then, teaching and learning of English has undergone significant changes in Oman. Now, ELT occupies an important position in the educational system of Oman and also in the global arena (Al-Issa, 2020). International English Language Testing System (IELTS) has gained popularity and recognition across the globe as a standardized exam for those seeking admission to universities in English-speaking countries.

Students who prepare for the IELTS test face many challenges. In order to ease this, the British Council and other private language schools in Muscat conduct teacher training courses (TTC) for IELTS instructors to improve their teaching strategies and enable them to assist test-takers in getting high test scores. They provide test-takers with a general idea of their final performance, which helps them understand their strengths and weaknesses in skills such as reading, writing, listening, and speaking. Nevertheless, Omani students face many challenges, particularly in IELTS-based reading exam (Ali et al., 2020).

According to the test criteria of IELTS, test-takers should read three 1500-2500-word passages and answer 38-42 questions within 60 minutes (IELTS Handbook, 2007). The difficulty level of texts and tasks requires test-takers to fully understand the reading exam format, reading strategies, and independent learning strategies to increase the chances of achieving the required band score in reading exams. In the context of Oman, many students struggle with reading comprehension, which negatively impacts their performance, especially students from rural backgrounds face more challenges due to their limited exposure to English outside the classroom (Chinnathambi et al., 2021, 2022a, 2022b, 2022c, 2023).

In Oman, the University of Technology and Applied Sciences (UTAS) conducts IELTS-based exams at level 4 in the preparatory studies center. The administration uses the test results to decide which students are eligible for admission to a bachelor's degree. According to the results, only a few students get the required scores and qualify for a bachelor's degree. The results indicate that there is a need for research in this area. In Oman, especially at UTAS, very few studies have explored the influence of reading strategies on Omani students' performance in IELTS reading exam at UTAS. This study attempts to fill the research gap by exploring the influence of reading strategies intervention on the performance of level 4 Omani students in IELTS-based reading exams. By addressing this research gap in the literature, this study will contribute to policy making and deciding on teaching strategies in reading classroom.

2. Literature Review

Cognitive theory of reading and metacognitive theory of reading are the most popular theories in this field of study. The former focuses on interpretation of meaning, decoding symbols, using prior knowledge, emphasizing how reading involves active processing and problem-solving (Ahmadian et al., 2016). The latter draws attention to the individual's awareness and regulation of their cognitive processes, emphasizing self-awareness and regulation of strategy while reading (Pressley & Afflerbach, 1995). Sweller (1988), in his cognitive load theory, points out that introducing complex reading texts to students without appropriate strategies will negatively affect their comprehension of the text. This theory highlights the importance of reading strategies to enhance the comprehension of complex reading texts. The metacognitive model of reading draws attention to how skilled readers actively use strategies and monitor their understanding of the reading text (Pressley & Afflerbach, 1995). It is evident that cognitive and metacognitive theories complement each other when it comes to the application of reading strategies and comprehension of reading passages. In addition, the theory of test-taking strategies highlights the importance of time management, understanding the tasks, and applying appropriate strategies to enhance the performance of students. Khoshshima et al. (2018) study findings reveal that students who received explicit instruction in these strategies performed far better than others who did not receive these instructions. Hence, this research draws its theoretical frameworks from these theories to explore reading strategy training and its influence on the academic performance of level 4 Omani students in the IELTS-based reading exam.

Globally, IELTS has become a standard for measuring language proficiency among non-native speakers. In Oman, it is used as a screening gatekeeper for Omani students who want to pursue higher education locally or internationally. English proficiency has become a job requirement in the Omani employment market (Al-Issa, 2020). Due to the importance that IELTS has gained in Oman, the challenges that Omani students face while taking IELTS exam have attracted the attention of researchers.

The reading test is one of the important components of IELTS. Reading comprehension is one of the most fundamental study skills in higher-level learning (Meniado, 2016). It is a problem-solving activity in which readers have an active role by constantly constructing meaning and testing hypotheses based on their background knowledge of the reading content and the language system (Ahmadian, Poulaki, & Farahani, 2016). Despite acquiring basic reading comprehension skills, test-takers may still struggle with the Academic IELTS reading component. Good readers may still face challenges due to the text's difficulty level and unfamiliarity (Guntur & Rahimi, 2019). This points out that reading comprehension skills and application of appropriate strategies are important to be a successful reader.

Many research findings have revealed the main challenges faced by students from non-English speaking countries during the IELTS exams. According to Ali, Washahi, and Alhassan (2020), the main difficulties in a standardized reading test are time management, using appropriate reading strategies, working out the meaning of lexical items from context, and the limited schema regarding the types and topics of the exam. Similarly, Chowdhury (2010) stated that unfamiliarity with the test structure is one of the challenges. In addition, note-taking, paraphrasing, guessing the meaning of unfamiliar words, and time management are common academic reading difficulties (Alghail & Mahfoodh, 2016). The research findings highlight the importance of test preparation to overcome these challenges.

Preparation for standardized tests such as IELTS is crucial for achieving high scores. Learners who undergo strategy instruction benefit more from reading strategy training (Soleimani, Zandiye, & Esmaeili, 2014; Khoshshima, Saed, & Mousaei, 2018). This affirms the notion that practice leads to improvement; the more students familiarize themselves with reading tasks and strategies, the better they can process reading texts (Lofti & Ghafournia, 2017). Ali et al. (2020) further supported this idea, recommending that more time should be allocated to familiarizing students with the nature and components of the IELTS reading test and extensively exposing them to test-taking techniques and strategies.

Test-taking strategies have been shown to improve test performance in various ways. Motallebzadeh (2009), Zare and Othman (2013), and Zare (2013) found a significant correlation between reading strategies and reading test performance. Accordingly, knowing and having clear steps to deal with different task types should be prepared in advance, especially for IELTS takers (Mũ & Quy ân, 2021). According to these studies, familiarity with the type and format of reading questions can lead to a better understanding of their content (Yathip & Chanyoo, 2022), which may enable test takers to select an appropriate strategy for the task being answered.

Previous studies on reading also draw attention to how students with varying achievement levels apply reading strategies differently. A study by Chinnathambi et al. (2024b) revealed that high-achieving students effectively applied reading strategies compared to average students while taking reading exams. Nosrati (2015) and Khoshshima et al. (2018) argued that test-takers used specific strategies differently depending on the type of task, and the most effective strategy instruction involves demonstrating when a strategy might be helpful.

Studies have produced conflicting results regarding the application of reading strategies between male and female students. Zare and Othman (2013) claimed significant differences between male and female students in the application of reading strategies. However, Zare (2013) revealed no significant difference in the use of reading strategies between male and female EFL learners. A recent quantitative study by Chinnathambi et al. (2024a) found that female students applied reading strategies more effectively and achieved better test scores than male students. These studies produced contradictory results, suggesting the need for further investigation into how gender can influence the use of reading strategies and test performance.

In summary, the literature highlights the difficulties that IELTS test-takers face in the reading component and gives recommendations to overcome these difficulties through reading strategy interventions to enhance reading comprehension and test performance of students.

Furthermore, studies show that high achieving students apply reading strategies more effectively than moderate and low achieving students. Similarly, studies demonstrate contradictory results with regard to gender differences in the application of reading strategies. Overall, the literature highlights the importance of explicit reading strategy teaching to improve test outcomes.

3. Methodology

3.1 Research Questions

1. Is there a significant difference, before the intervention, in the pre-test scores between the control and experimental groups?
2. Do the control and experimental groups, after the intervention, differ significantly in their post-test scores?
3. Did the experimental group, after receiving intervention, show significant improvement in their post-test scores compared to their pre-test scores?
4. Did the control group that received no intervention show significant changes in their post-test scores compared to their pre-test scores?
5. Is there a significant difference in gender distribution between the control group and experimental group?
6. Do the control group and experimental group differ in their independent learning behaviors?
7. Is there a significant difference in the test strategies used by the control group and experimental group?
8. Is there a significant difference in the mean improvement scores from pre-test to post-test between the control group and experimental group?

The study has formulated eight null hypotheses to answer the research questions.

1. There is no significant difference between the mean scores of the pre-test scores of the control and experiment groups before the intervention.
2. There is no significant difference between the mean and post-test scores of the control and experiment groups.
3. There is no significant difference in the experiment group's pre-test and post-test scores.
4. There is no significant difference in the control group's pre-test and post-test scores.
5. There is no significant difference between the control and experiment groups regarding gender.
6. There is no significant difference in the mean scores of the independent learning behaviors between the control group and the experiment group.
7. There is no significant difference in the mean scores of the test strategies between the control group and experiment group.
8. There is no significant difference in the mean improvement scores between the control and experimental groups from the pre-test to the post-test.

3.2 Method

An experimental research design was employed in this study by selecting two groups, namely the control group and the experiment group. The groups were chosen randomly. A quantitative research method was performed to find out the effect of reading strategy interventions on students' academic achievement. For six weeks, the targeted reading strategy interventions were given to the experiment group. For the same period of time, the control group received only standard instructional procedures. The experiment group and control group received pre-test before the beginning of interventions and post-test at the end of the interventions period respectively. An official IELTS based reading exam was used for both exams. Moodle was used to administer the questionnaire and collect data on independent learning behaviors and the use of reading strategies while taking the exam.

The research instruments were tested for their reliability and validity prior to their administration. The self-prepared questionnaire was piloted prior to their actual study and submitted to an expert for validation. The question paper used for pre-test and post-test was based on official IELTS model adopted by the University of Technology and Applied Sciences. It is a standardized instrument used at UTAS for assessing reading proficiency. The study applied valid and reliable research instruments to enhance its credibility.

3.3 Participants

The survey was conducted with students from the General Foundation Program (GFP) at the Preparatory Studies Centre, University of Technology and Applied Sciences-Ibra in the Sultanate of Oman. A total of 24 Level Four Omani students from the Sharqiyah region participated in the survey.

3.4 Research Instruments

A self-prepared Questionnaire was used to collect data on reading strategies and independent learning behaviors from students in the experiment group and control group. An IELTS based exam was administered to students in both groups at the beginning of the intervention (pre-test) and at the end of the intervention (post-test), to measure their initial performance and end of intervention performance respectively. The same exam was used for both the pre-test and post-test. The intervention was given to the experiment

group for about six weeks, but the control group received only the standard procedure. Statistical Package for Social Sciences (SPSS) was used to analyze the data.

3.5 Terms and Definitions

CS-Sentence Completion; GS-General Reading Strategies; LA-Level of Awareness; MC-Multiple Choice Questions; MH-Match the Headings to the Paragraphs; SA-Short Answer Questions; SC-Summary Completion; TF-True or False or Not Given

4. Results

This study aims to evaluate the effectiveness of an intervention in improving reading scores. We compared the pre-test and post-test scores within and between the control and experiment groups.

Table 1. Frequency by gender

Group	Gender		Percentage	
	Male	Female	Male	Female
Control	5	7	41.66	58.33
Treatment	8	4	66.67	33.33

Table 1 shows a difference in the number of male and female students in both groups. The treatment group has eight male students compared to the control group, which has five male students. On the contrary, the treatment group has four female students compared to seven female students in the control group. According to the percentage, 58.33% of female and 41.67% of male students are in the control group, while the treatment group has 33.33% of female students and 66.67% of male students. Table 1 highlights the differences in the distribution of male and female students, which may affect the results of both groups.

Hypothesis 1: There is no significant difference in the mean pre-test scores of the control and experiment groups.

Table 2. The Mean Scores of the Pre-test scores of the Control and Experiment Groups

	Control and Experiment	N	Mean	Std. Deviation	t value	p-value
Pre-test	Control	12	12.8333	2.72475	0.989	0.333
	Experiment	12	14.0000	3.04512	0.989	0.334

Table 2 shows the mean scores of the pre-test scores of the control and experiment groups. The data clearly illustrates no significant variation between the mean scores. Also, the data reveals no statistically significant difference between the mean score of the control and experiment groups since the p-value is more significant than 0.05%. The mean scores and statistical insignificance prove that both groups were equated before the experiment, which suggests that there would be little difference in the academic performance of the control and experiment groups in any tests. Therefore, based on the experiment given, there is a possibility of seeing the difference in academic performance between the control and the experiment groups.

Hypothesis 2: There is no significant difference between the mean scores of the post-test scores of the control and experiment groups

Table 3. The mean scores of the Post-test scores of the Control and Experiment groups

	Control and Experiment	N	Mean	Std. Deviation	t value	p-value
Post-test	Control	12	16.6667	2.80692	-1.851	0.078
	Experiment	12	18.5833	2.23437	-1.851	

Table 3 shows the mean post-test scores of the control and experiment groups. The data depicts that there is a difference between the mean scores. The mean score of the experiment group is 18.58, which is higher than that of the control group's mean score, 16.66, signifying that the experiment group scored better on average. However, the data reveals no statistically significant difference between the mean score of the control and experiment groups since the p-value is more significant than 0.05%. The statistical insignificance indicates that there is not enough evidence to prove there is a significant difference between the two groups. However, this is due to the small sample size (24). Nevertheless, the average mean score of the experiment group advocates that the intervention/experiment given affected the academic performance of the experiment group. The result suggests that the productivity level of students increases by giving them chances to apply reading strategies, continuous practice, scaffolding, and constructive feedback.

Hypothesis 3: There is no significant difference in the pre-test and post-test scores of the experiment group

Table 4. The mean scores of the Pre-test and Post-test scores of the experiment group

Experiment Group	Mean	N	Std. Deviation	t value	p-value
Pretest	14.0000	12	3.04512	-3.831	0.003
Posttest	18.5833	12	2.23437		

Table 4 shows the mean score of the pre-test scores and post-test scores of the experiment group. The data demonstrates a difference between the pre-test and post-test mean scores. Also, the data discloses that the difference is statistically significant since the p-value is greater than 0.05%. The mean scores and the statistical significance prove that the intervention given to the experiment group is adequate. Students performed better in their post-test compared to the pre-test, which is noteworthy. Thus, it is highly recommended that teachers design a teaching plan that includes test-taking strategies and also prepare materials that demonstrate the application of those strategies.

Teachers should train the students to use test-taking strategies to answer the different questions.

Hypothesis 4: There is no significant difference in the pre-test and post-test scores of the control group

Table 5. The mean scores of the Pre-test and Post-test scores of the experiment group

Control Group	Mean	N	Std. Deviation	t value	p-value
Pretest	12.8333	12	2.72475	-3.754	0.003
Posttest	16.6667	12	2.80692		

Table 5 shows the mean scores of the pre-test and post-test scores of the control group. The data shows a slight difference between the pre-test and post-test mean scores. Also, the data discloses that the difference is statistically significant since the p-value is greater than 0.05%. The mean scores and statistical significance are similar to those of the experiment group. In order to check whether the intervention benefited the experiment group, further investigation is needed.

Looking at the gender distribution between the two groups, the control group has more female students than male students, and vice versa in the case of the experiment group. So, there is a possibility that gender could have played a significant role in affecting the results of both groups. Based on the study by Zare and Othman (2013), there were significant differences between male and female ESL learners in using reading strategies. However, Zare (2013) revealed no significant difference in the use of reading strategies between male and female EFL learners.

Hypothesis 5: There is no significant difference between the control and experiment groups regarding gender.

Table 6. Frequency Distribution by Gender

Gender	Control	Experiment	Percent	
Male	5	8	41.7	66.7
Female	7	4	58.3	33.3
Total	12	12	100.0	100.0

Table 7. The relationship between the control group and the experiment group

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.510 ^a	1	.219		
Continuity Correction ^b	.671	1	.413		
Likelihood Ratio	1.527	1	.217		
Fisher's Exact Test				.414	.207
Linear-by-Linear Association	1.448	1	.229		
N of Valid Cases	24				
a. 0 cells (0.0%) have an expected count of less than 5. The minimum expected count is 5.50.					
b. Computed only for a 2x2 table					

Tables 6 and 7 show the chi-square test of independence to examine the relationship between the control and experiment groups and the influence of gender. The observed frequencies are eight males and four females in the experiment group and five males and seven females in the control group. The chi-square test reveals a chi-square value of 1.510 with 1 degree of freedom and a p-value of 0.219. We accept the null hypothesis since the p-value is more significant than 0.05. Therefore, we conclude that statistically, there is no significant difference in gender between the control and experiment groups. This confirms Zare's research findings (2013).

Hypothesis 6: There is no significant difference in the mean scores of the independent learning behaviors between the control group and the experiment group.

Table 8. Independent Learning Behaviour of Control and Experiment Groups Mean scores

Independent Learning	Mean		Std. Deviation	
	Control	Experiment	Control	Experiment
Library Visit	2.58	3.33	1.37	1.30
Go Through Previous Exams	3.00	3.16	1.27	1.11
Solve Previous Exams	3.16	3.16	1.26	0.83
Read Newspapers/Magazines	3.41	2.58	1.16	1.37
Read IELTS Materials	2.83	2.91	1.33	1.37
Discuss Techniques with Friends	3.33	3.08	1.07	1.37
Clarify Doubts with Teacher	3.50	3.16	1.24	1.33
Discuss Solve Problems with Friends	3.00	3.00	1.20	1.47
Share Reading Texts	3.50	2.66	1.16	1.30

According to Table 8, there is a difference between the control group and the experiment group regarding the mean scores of some

independent learning behaviors. The control group shows higher mean scores in behaviors like reading newspapers/magazines, discussing techniques with friends, clarifying doubts with the teachers, and sharing reading texts. In comparison, the experiment group shows higher mean scores in library visits, going through previous exams, and reading IELTS material. Both groups show the same mean score in behaviors like solving previous exams and discussing and solving problems with friends. However, compared to the experiment group, the control group demonstrates a better understanding of independent learning habits. This understanding helps them perform better without any reading strategy interventions. At the same time, we cannot reject the possibility of the positive influence of reading strategy interventions on the independent learning activities of the experiment group. These interventions may have motivated them to engage well in independent learning activities and perform better in reading tests.

Hypothesis 7: There is no significant difference in the mean scores of the test strategies between the control group and the experiment group.

Table 9. Mean scores of the Test Strategies of Control and Experiment Groups

Test Strategies	Mean		Std. Deviation	
	Control	Experiment	Control	Experiment
MH1	3.66 3.50		0.88	1.38
MH2	3.91 3.75		0.79	1.28
MH3	3.50 3.58		1.08	1.37
TFNG1	3.33 3.91		1.07	1.24
TFNG2	3.50 3.50		0.90	1.38
TFNG3	4.00 3.50		0.85	1.24
TFNG4	3.66 3.75		0.65	0.96
MC1	3.75 3.66		0.75	0.88
MC2	4.00 3.33		1.04	1.07
SMC1	3.83 3.75		0.83	1.05
SMC2	3.75 3.41		0.75	0.99
SMC3	3.83 3.00		1.02	0.95
SMC4	3.91 3.50		0.79	1.31
SC1	3.66 4.00		0.88	0.73
SC2	4.00 3.33		0.73	1.98
SA1	3.16 3.75		0.93	1.05
SA2	4.16 4.00		0.83 0.82	1.04 1.07
Total	3.84 3.62			

Table 9 shows the mean scores of the test strategies between the control and experiment groups. The data shows a difference in the mean scores of the control group (3.84) and the experiment group (3.62). Before the intervention, the control group revealed greater awareness and proficiency regarding applying various test strategies than the experiment group. The result indicates that the control group applies the test strategies more than the experiment group. Using test strategies is crucial to score high marks in the reading exam. The control group demonstrates consistent and good performance in the post-test scores because they may practice all necessary strategies without intervention.

On the other hand, the mean scores of the experimental group on the influence of the test strategies were lower than those of the control group. This highlights that the experiment group is less proficient or familiar with the test strategies than the control group. However, their post-test scores increased. This indicates that the intervention significantly helped the experiment group improve their performance, matching that of the control group.

Hypothesis 8: There is no significant difference in the mean improvement scores between the control and experimental groups from the pre-test to the post-test.

Table 10. The Improvement Scores of the Control Group and Experiment Group

Group	Pre-Test Score	Mean	Post-Test Score	Mean	Improvement Mean Score	Percentage of Improvement
Control	12.83		16.67		3.84	29.92%
Experiment	14.00		18.58		4.58	32.71%

Table 10 shows the improvement scores of the control and the experiment groups. The experiment group's improvement mean score is 4.58 (32.71%), which is higher than the control group's.

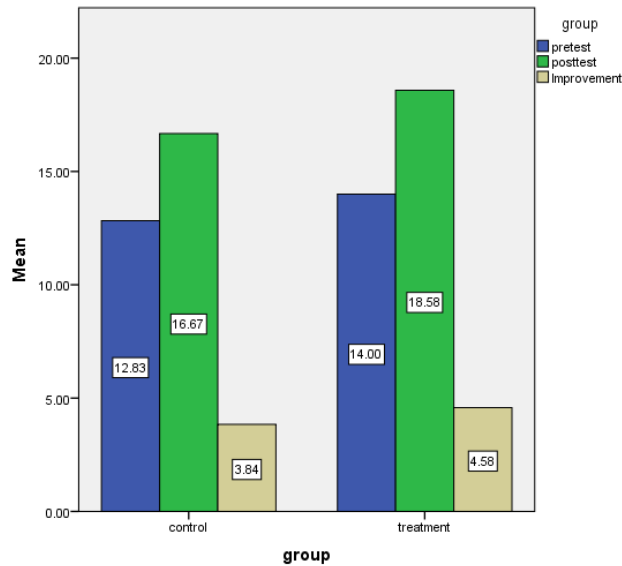


Figure 1. Comparison of Control and Experiment Groups' Test Scores

The graph illustrates the positive impact of the intervention on the experiment group, demonstrating a noticeable improvement in students' performance. The above table and the graph show that the experiment group benefitted from the intervention.

5. Discussion

The study aims to investigate the influence of reading strategy intervention on the academic performance of Level 4 Omani students in the IELTS-based reading exams. The analysis of gender distribution, independent learning strategies, reading strategies, and pre and post test scores provide significant insights into the influence of reading strategy intervention on level 4 Omani students' test outcomes. As far as gender is concerned, the results presented in Table 7 show that gender did not influence the outcome of the study, not statistically significant ($p = 0.219$), which aligns with the study findings of Zare (2013) that gender does not play any significant role in the application of reading strategies. In contrast to Zare and Othman's (2013) and Kodhandaraman et al. (2024a) studies' findings, the current study shows no influence of gender on reading strategy use. The pre-test scores between the control group and experimental group show no statistically significant difference ($p = 0.333$). The two groups had similar levels of reading proficiency, which allows for exploring the influence of reading strategy intervention. Hence, the answer for the first research question is that there is no significant difference, before the intervention, between the control group and the experiment group in the pre-test scores.

The mean score of experiment group was 18.58, but the control group's was only 16.67 in the post-test scores. The higher mean score of experiment group suggests the positive influence of the reading strategy intervention. However, both groups reveal no statistically significant difference ($p = 0.078$), which could be attributed to the smaller sample size. However, the results of the mean scores indicate the effectiveness of the intervention given to the experiment group. This finding is consistent with the study findings of Lofti and Ghafournia (2017) that strategy training can improve the reading performance of students. So, the answer for the second research question is that there was a difference between the control group and the experiment group in the mean score, suggesting the influence of reading strategy on Omani students' performance.

The experiment group showed significant improvement ($p = 0.003$), after receiving intervention, between pre-test (14.00) and post-test (18.58) scores. This positive impact of reading strategy intervention on performance indicates that level 4 Omani students effectively applied reading strategies and approached the test strategically and with enough confidence, suggesting the positive influence of the intervention. In addition to the improvement in scores, experiment group also demonstrated a higher mean score in post-test scores compared to the control group as shown in table 10. This finding that reading strategy instruction improves the test outcomes is consistent with the study findings of Motalebzadeh (2009) and Zare & Othman (2013) that strategic reading could positively impact test scores. This

is also in consistent with the recommendation of Ali et al. (2020) that reading strategy intervention should be incorporated into academic programs to improve students' academic performance.

With regard to independent learning strategies, both groups showed different independent learning behaviors. The control group read newspapers, clarified doubts with teachers, and discussed techniques with friends, whereas the experiment group focused more on solving previous year's exam papers and engaging more with IELTS materials, which could be the influence of the intervention. These findings highlight that the reading strategy intervention could streamline students' independent learning behaviors. Similarly, the control group also showed higher mean scores in the use of various test strategies, presented in Table 9, despite the control group's exposure to these strategies even before the intervention. This better performance of the experiment group could be attributed to the intervention they received. This study's findings highlight the success of the explicit instruction of test strategies, which are in alignment with the study findings of Kodhandaraman et al. (2024b) and Ali et al. (2020) that explicit instruction of test-taking strategies enhances the academic performance of students.

According to Table 10, the experiment group's mean improvement scores showed higher improvement scores (32.71%) compared to (29.92%) the control group. The difference demonstrates the effectiveness of the targeted reading strategy intervention and is inconsistent with the study findings of Lofti & Ghafournia (2017) that students who receive test-taking strategies could perform better than those who do not.

To sum up, the study did not yield any statistically significant difference between the experiment group and the control group, but there was a significant improvement in the reading performance of the experiment group. This improvement highlights the effectiveness of reading strategy intervention and the importance of teaching test-taking strategies. The findings suggest that tailored intervention can build students' confidence and improve their academic performance.

6. Conclusion

This study investigated the effectiveness of reading strategy intervention in enhancing the academic performance of level 4 Omani students in IELTS-based reading exams. The analysis of post-test scores revealed that the experiment group's mean score was higher than the control group's mean score. Similarly, examining independent learning behaviors and test strategies demonstrated that the experiment group solved previous exams and IELTS-specific materials more and was frequently involved with test-related activities. Together, these contributed to the improved performance of the experiment group. Along this side, the tailored intervention contributed to the experiment group's familiarity and the frequent application of test-taking strategies, resulting in a higher confidence level. Compared to the experiment group, the control group also showed some improvement but not to the degree of the former. From the above findings, it can be inferred that tailored reading strategy intervention could be beneficial to students to enhance their academic performance and test outcomes in the IELTS-based reading exams.

7. Limitations

The study has its limitations. It used only a small sample size and was conducted in one higher educational institute. Further research is needed with larger sample sizes and more comprehensive analysis. Similarly, the duration of the intervention was short, which may not fully reveal the impact of reading strategies on test scores. Also, a longitudinal study is required to understand the effectiveness of the reading strategy interventions. Differing teaching methods, quality of teaching, and teaching contexts may affect the quality of intervention, so further research is needed in these areas.

8. Recommendations

It is recommended that the Preparatory Studies Centers integrate reading strategy training into the curriculum, focusing on the test formats and question types of the IELTS tests. In addition, tailored reading strategy interventions should be given based on need. This will help students overcome challenges related to time management and comprehending various reading texts.

Opportunities for students to develop independent learning behaviors should be generated so that they will be motivated to visit the library, solve previous exams, and establish self-directed learning habits. Appropriate feedback mechanisms should be incorporated. Formative assessments, practice tests, and individual feedback sessions on using reading strategies will be beneficial.

Preparatory study centers should collaborate with IELTS testing centers like the British Council and Hawthorn in Muscat to create effective intervention programs. Similarly, collaboration with educational researchers will help refine teaching methods based on their latest research findings.

Finally, to ensure that all the above recommendations work correctly, it is essential to periodically evaluate the effectiveness of reading strategy interventions to ensure that they benefit students.

Authors bio-note

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Authors' contributions

Dr. Kodhandaraman Chinnathambi is responsible for designing the study, generating data, and writing manuscript

Ms. Latha Anandan is responsible for data analysis and data interpretation

Ms. Nancy Dalangbayan Tago is responsible for literature review

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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